SONY

Multiscan Rear Projector

Operating Instructions page 2
Before operating the unit, please read this manual thoroughly and retain it for future reference.
Installation and preliminary adjustments should be performed by qualified Sony personnel.

Mode d'emploi page 36
Avant la mise en service de cet appareil, lire attentivement ce mode d'emploi et le conserver pour toute référence ultérieure.
L'installation et les ajustements préliminaires doivent être effectués par un personnel Sony qualifié.

Desktop Data

RVP-4015Q/4015QM

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MC-Service

WARNING

For the customers in the USA

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

Owner's Record

The model and serial numbers are located on the side. Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____ Serial No. _____

For the customers in Canada

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

For the customers in the United Kingdom

WARNING
THIS APPARATUS MUST BE EARTHED

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:

Green-and-yellow : Earth
Blue : Neutral
Brown : Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows: The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow. The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

Voor de klanten in Nederland

Bij dit produkt zijn batterijen geleverd. Wanneer deze leeg zijn, moet u ze niet weggooien maar inleveren als KCA.

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English

Important

Safety

- Check that the operating voltage of the unit is identical with the voltage of your local power supply. If a voltage conversion is required, consult your Sony dealer or qualified personnel.
- Should any liquid or solid object fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it further.
- Unplug the unit from the wall outlet or set the MAIN POWER switch to OFF if it is not to be used for several days.
- The wall outlet should be near the unit and easily accessible.
- To disconnect the cord, pull it out holding the plug. Never pull the cord itself.
- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.

Installation

- Allow adequate air circulation to prevent internal heat built-up. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.
- Do not install the unit in a location near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust or humidity, mechanical vibration or shock.
- To avoid moisture condensation, do not install the unit in a location where the temperature may rise rapidly.
  The unit may be connected to an IT power system with phase – phase voltage 230 V.

Room illumination

- To obtain the best picture, the front of the screen should not be exposed directly to sunlight or artificial lighting.
- Ceiling mounted spot lighting is recommended. Use a cover over fluorescent lamps to avoid lowering the contrast ratio.

Cleaning

- To keep the cabinet in its original condition, periodically clean it with a soft cloth. Stubborn stains may be removed with a cloth lightly dampened with a mild detergent solution. Never use organic solvents such as thinners, or abrasive cleansers, since these will damage the cabinet.
- Avoid touching the lens. To remove dust on the lens, use a soft dry cloth. Do not use a damp cloth, detergent solution, or thinners.
- Clean any dirt from the protective screen (the outer surface of the screen) by lightly wiping with a soft dry cloth. Severe soiling can be treated with a cloth steeped in a little neutral detergent and wrung out well, following by wiping dry. Always disconnect the power cord from the outlet before cleaning.
- Be careful not to subject the protective screen to abrasion, as this may damage the non-glare coating.

Repacking

- Save the original shipping carton and packing material; they will come in handy if you ever have to ship the unit. For maximum protection, repack the unit as it was originally packed at the factory.

Cathode-ray tube burn-in

- If a static image from a video disc or computer is projected for an hour or more, "burn-in" occurs, leaving a permanent trace of the image burnt into the phosphor on the screen. If it is essential to project a static image for an extended period, reduce the contrast (CONTR) as much as possible.
  Again, if the unit is used to display images at sizes and aspect ratios other than 40 inches and 4:3 for a long time (when using 16:9 image software, for example), the frame of the smaller picture may also be visible, having become burnt into the phosphor. If it is essential to use the unit for images of both aspect ratios, reduce the contrast (CONTR) and brightness (BRT) of the smaller picture as much as possible to reduce burn-in.
  If burn-in occurs, the cathode-ray tube must be replaced. In this case, the cost of replacement is not covered by the warranty. Consult your Sony dealer or a Sony service representative for more information on the replacement.

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Features

Multiscan projector

The projector accepts and detects automatically horizontal scanning frequencies between 15 kHz and 85 kHz and vertical scanning frequencies between 38 Hz and 150 Hz. In addition to high-resolution computer images and teletext, the output from a VCR or video camera can also be projected.

Bright image — luminance 100 ft-L

A newly-developed phosphor, 7-inch CRT, and improved high voltage circuitry provides super brightness.

Non-glare coated screen

A non-glare coated protective screen protects the main screen and reduces reflection from fluorescent and other light sources, and enhances the picture contrast.

High picture resolution — 800 × 800

The Sony HACC (High-resolution Aspherical and Color Corrected) lens contributes to picture sharpness and improved contrast. A high-quality picture, with an 800 by 800 resolution is obtained by a system whose design features include an electron gun designed for high picture sharpness, a liquid-cooled tube for even better color reproduction, and an anti-reflection coating to improve corner focus and contrast.

Remote commander

All adjustments can be controlled with the supplied Remote Commander. This can be used either as a wireless remote control, or connected with the supplied cable.

On-screen status display

Picture and sound adjustments, and various indications and error messages can be displayed on the screen. It is also possible to display the current settings and input signal type on the screen.

Wide viewing area

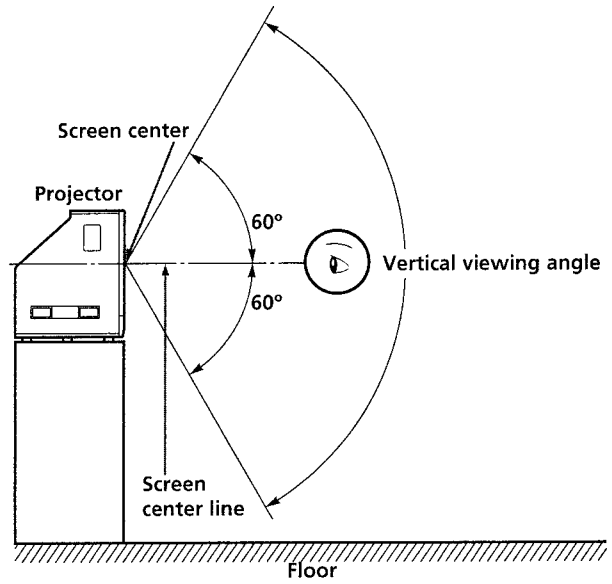
A wide viewing area assures ease of viewing even when you are making a desk top presentation right beside the screen.

Other functions

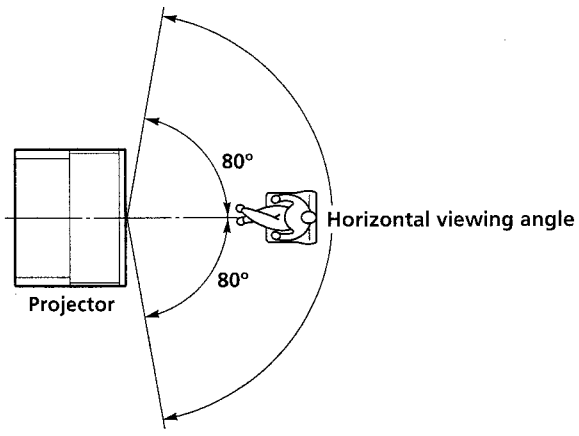
- **Four color systems supported**
  The unit supports NTSC, PAL, SECAM, and NTSC4.43 color systems, and detects the input signal type automatically.
- **Illuminated control panels**
  Both the control panel on the main unit and that on the Remote Commander have a LIGHT button which switches the control panel illumination on and off, for ease of use in dark situations.
- **Built-in test pattern**
  For centering operations without an external signal connected, the unit supplies its own test pattern signal.

Viewing Angle

Vertical viewing angle

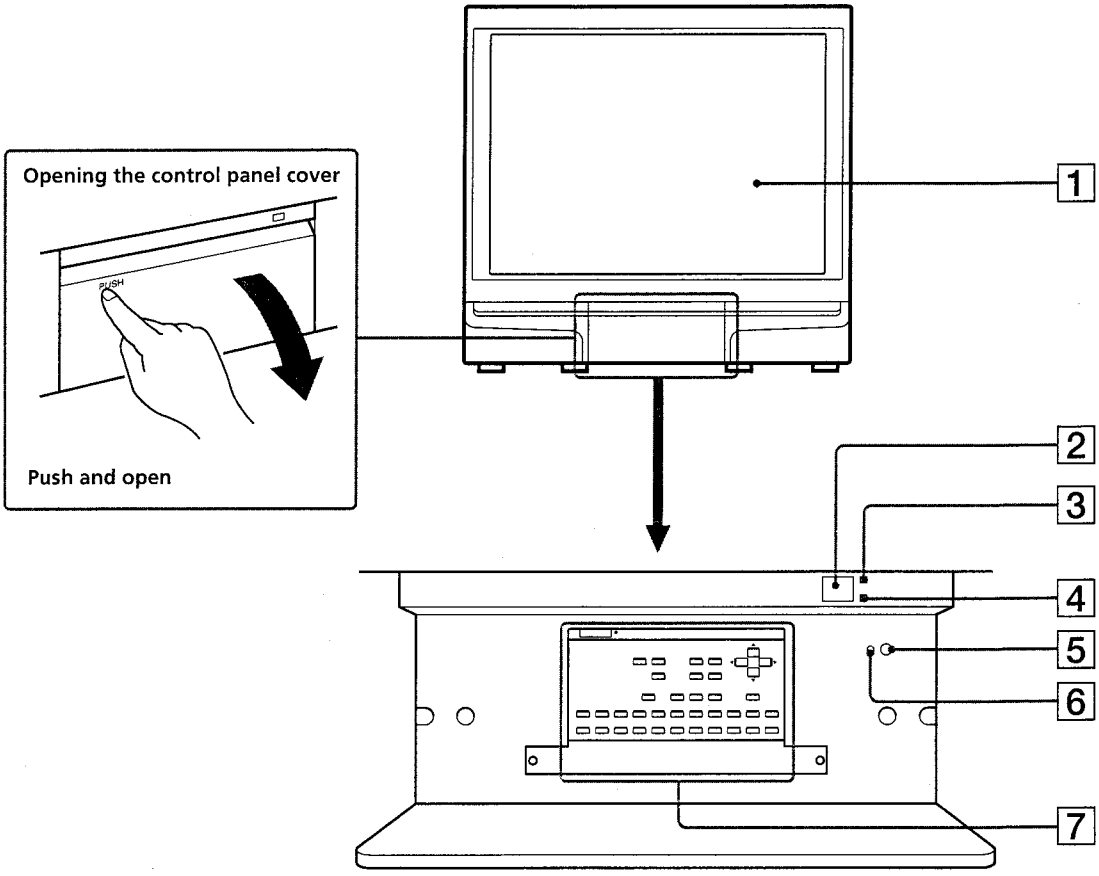


Horizontal viewing angle



Location and Function of Controls

Front



1 Screen

2 Remote control sensor

3 POWER indicator

Lights green when the projector is turned on.

4 STANDBY indicator

Lights red when the MAIN POWER switch on the rear is on. When this indicator is lit, you can turn the projector on or off with the Remote Commander.

Note

When the MAIN POWER switch is turned off, there will be a slight delay before the STANDBY indicator goes off. This does not indicate malfunction of the projector.

5 CONTROL S IN connector for maintenance purposes

Do not connect anything.

Note

If the remote control cable is connected to this connector, it is not possible to control the projector from the control panel on the unit, by wireless Remote Commander, by a Remote Commander connected to the CONTROL S IN connector on the rear, or by an external switcher.

6 WIRELESS ON/OFF switch

Turn this switch off when you do not wish the wireless Remote Commander to control the projector, or when the wired Remote Commander connected to the CONTROL S IN connector on the rear does not work properly due to the interference from the noise generated by fluorescent lamps or other sources.

7 Control panel

The buttons inside the panel cover are the same as those on the Remote Commander. For details about using these buttons, see the section "Remote Commander RM-PJ4010" *(page 10)*.

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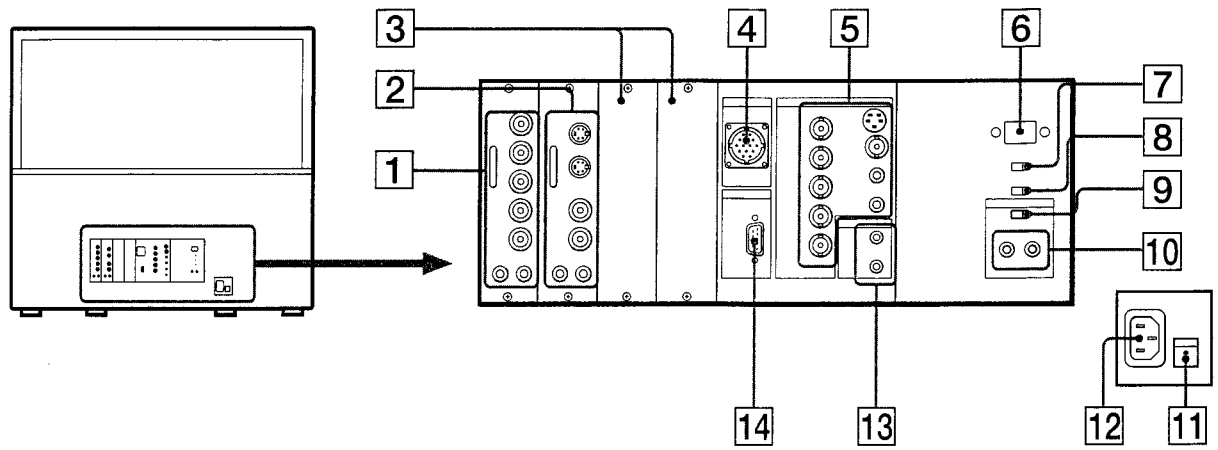
Rear



1 INPUT A connector panel

R, G/G SYNC, B, SYNC/HD, VD connectors (BNC type)

Connect to the video output connectors of a computer or other equipment.

AUDIO IN connectors (phono)

Connect to the audio output connectors of a VCR or other equipment.

2 INPUT B connector panel

Y/C IN connector (mini-DIN 4-pin)

Connect to the S-video output connector of a VCR or other video equipment.

VIDEO IN connector (BNC type)

Connect to the video output connector of a VCR or other video equipment.

Note

When cables are connected to both the Y/C IN and VIDEO IN connectors, the signals input to the Y/C IN connector take precedence. If you wish to view the picture from the equipment connected to the VIDEO IN connector, do not connect anything to the Y/C IN connector.

Y/C OUT connector (mini-DIN 4-pin)

Connect to the S-video input connector of a color monitor, VCR or other video equipment. The signals input to the Y/C IN connector are output from this connector.

VIDEO OUT connector (BNC type)

Connect to the video input connector of a color monitor, VCR or other video equipment. The signals input to the VIDEO IN connector are output from this connector.

AUDIO IN connectors (phono)

Connect to the audio output connectors of a VCR or other equipment.

3 Interface board slots

When expanding inputs to the projector, install the optional IFB-11/20/30/1000/1200/101 interface boards in these slots. Slots are identified as INPUT C and INPUT D from the left. Note that the IFB-101 interface board can only be installed in the INPUT D slot.

4 REMOTE 1 connector (14-pin)

Connect to the optional PC-1271/1271M switcher.

5 MONITOR OUT connector panel

Connectors on this panel output the signals selected with the INPUT SELECT buttons on the control panel or Remote Commander.

R, G, B, SYNC/HD, and VD connectors (BNC type) , Y/C connector (mini-DIN 4-pin), VIDEO connector (BNC type), AUDIO connectors (phono)

Connect to a monitor or projector.

6 Error code indicator

If a fault is determined in the unit, this displays an error code indicating the type of error. If a failure occurs, write down the error code indicated here before contacting your Sony service representative.

7 SPEAKER switch

Turn this on when using the built-in speakers. Turn it off when not using them.

8 AUDIO VAR/FIX switch

Set to VAR to control the output volume from the AUDIO connectors on the MONITOR OUT connector panel using the VOL +/– buttons on the Remote Commander. When this switch is in the FIX position, the volume is fixed.

9 REMOTE 3 switch

Normally this switch should be in the OFF position. Use this switch when connecting multiple RVP-4015Q/QM units together for simultaneous use.

For details, see page 27.

10 REMOTE 3 IN/OUT connectors (phono)

Use these connectors when connecting multiple RVP-4015Q/QM units together for simultaneous use.

For details, see page 27.

11 MAIN POWER switch (▬ ON/ ▮ OFF)

12 AC IN socket

Connect the supplied AC power cord (mains lead).

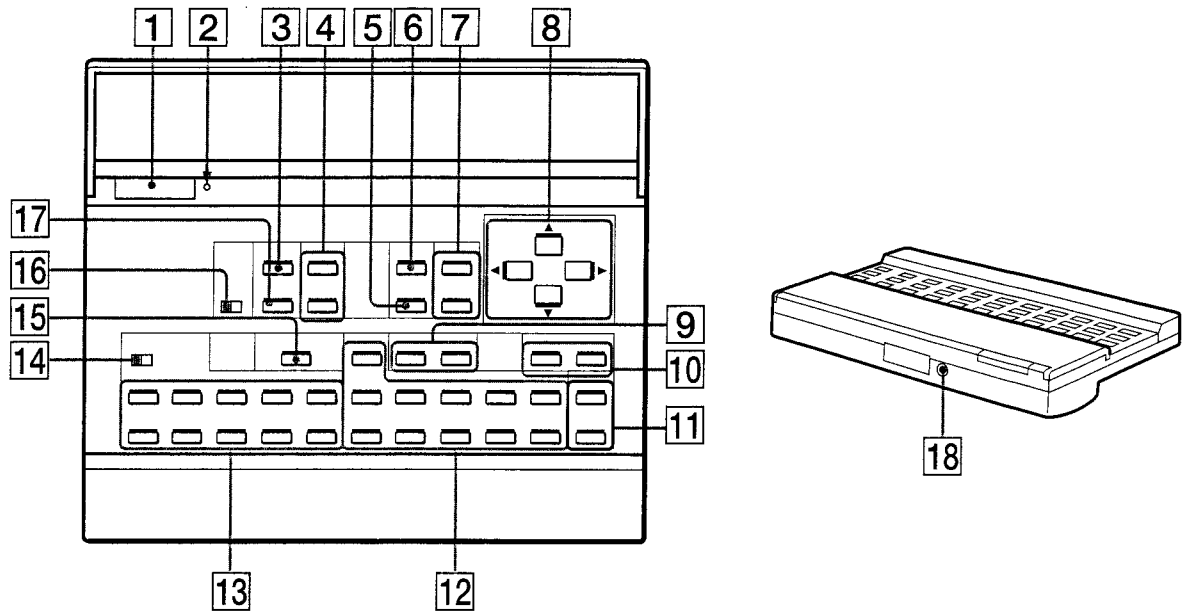
13 CONTROL S IN/OUT connectors (phono)

Connect the CONTROL S IN connector to the CONTROL S OUT connector of the supplied Remote Commander when using the commander as a wired Remote Commander. Connect the CONTROL S OUT connector to the CONTROL S IN connector of other Sony equipment.

14 REMOTE 2 connector (9-pin)

Connect RS-422 interface for communication with a computer.

Remote Commander RM-PJ4010



1 LIGHT button

Press to illuminate the button indications. The illumination automatically goes off if you do not touch any button for about 30 seconds.

2 Transmission indicator

Lights when you press any of the buttons on the Remote Commander. If it does not light, replace the batteries.

3 MEMORY button

Press to save the settings.

4 STATUS ON/OFF buttons

Press the OFF button to turn off the on-screen status display. Note that the PAGE setup can be displayed even when the status display is turned off. Press the ON button to restore the on-screen status display.

5 RGB SHIFT button

Press to adjust the position of picture from the equipment connected to the RGB IN connector. Use the four arrow buttons for adjustment. Pressing the ◄, ►, ▲, or ▼ button moves the picture in the direction of the arrow.

6 RGB SIZE button

Press to adjust the size of picture from the equipment connected to the RGB IN or VIDEO IN connector. Use the four arrow buttons for adjustment.

- ◄ to reduce the picture size horizontally
- ► to expand the picture horizontally
- ▲ to expand the picture vertically
- ▼ to reduce the picture size vertically

7 CENT (centering) R (red)/B (blue) buttons

R: Pressing this button displays a test pattern on the screen and enters red centering mode. Use the four arrow buttons for adjustment.

B: Pressing this button displays a test pattern on the screen and enters blue centering mode. Use the four arrow buttons for adjustment.

8 Arrow buttons

Use these buttons for centering, RGB/VIDEO SIZE adjustment, RGB SHIFT adjustment and other adjustments.

9 PJ MUTING buttons

PIC: Press to blank the picture. To restore the picture, either press the PIC button again or press the CONTR+ button.

AUDIO: Press to mute the sound. To restore the sound, either press the AUDIO button again or press the VOL+ button.

10 POWER ON/OFF buttons

These power the projector on or off when the MAIN POWER switch is set to ON.

11 VOL (volume) +/– buttons

These control the volume.

12 PICTURE CONTROL buttons

Press to adjust picture properties such as contrast, color, brightness, sharpness and hue. To restore the picture to its standard state, press the RESET button.

13 INPUT SELECT buttons

When the INPUT SEL/INDEX selector 16 is set to INPUT SEL and the PJ/SWITCHER selector 14 is set to PJ

Press one of the A, B, C and D buttons to select an input to the projector.

When the INPUT SEL/INDEX selector 16 is set to INPUT SEL and the PJ/SWITCHER selector 14 is set to SWITCHER

Press one of the number buttons 1 to 8 to select an input to the optional PC-1271/1271M switcher. When two switchers are connected to the projector, first press the SECOND button, and then press the desired number button to select an input to the second switcher whose SINGLE/SECOND/OTHER switch is set to SECOND.

When the INPUT SEL/INDEX selector 16 is set to INDEX

These buttons function when the optional IFB-101 interface board is installed and multiple projectors are used.

For details about using these buttons, refer to the operating instructions for the IFB-101.

14 PJ/SWITCHER selector

When the INPUT SEL/INDEX selector 16 is set to INPUT SEL, this determines which inputs the INPUT SELECT buttons select signals from.

PJ: Select signals from inputs to the projector

SWITCHER: Select signals from inputs to the switcher

15 PAGE button

Press to confirm the current settings for various functions. (Pages 1, 2 and 3 provide settings in addition to confirmation.) There are four pages and pressing the button cycles through these pages.

PAGE 1: Displays user settings such as STATUS, PIC MUTING ON/OFF.

PAGE 2: Displays picture properties (contrast, color etc.) and volume.

PAGE 3: Displays color temperature, clamp position and vertical shift range.

PAGE 4: Displays the status of currently selected input signals.

16 INPUT SEL/INDEX selector

Set to INPUT SEL when selecting signals from inputs to either the projector or switcher. Set to INDEX when installing the optional IFB-101 interface board and using multiple projectors.

17 ENTER button

This functions when the optional IFB-101 interface board is installed and multiple projectors are used.

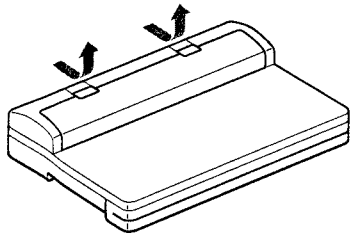
For details about using this button, refer to the operating instructions for the IFB-101.

18 CONTROL S OUT connector (phono)

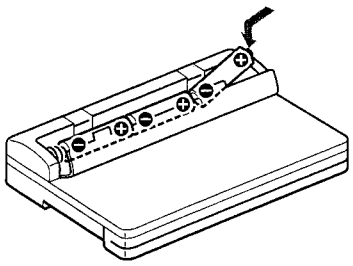
Connect to the CONTROL S IN connector on the projector when using this commander as a wired Remote Commander.

Battery replacement

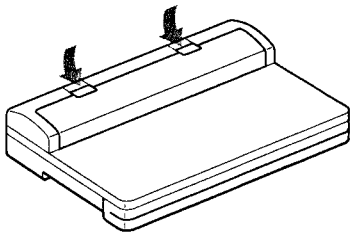
1 **Push to open the lid.**



2 **Insert three AA (R6) batteries, with the correct polarity.**



3 **Replace the lid.**



Notes on batteries

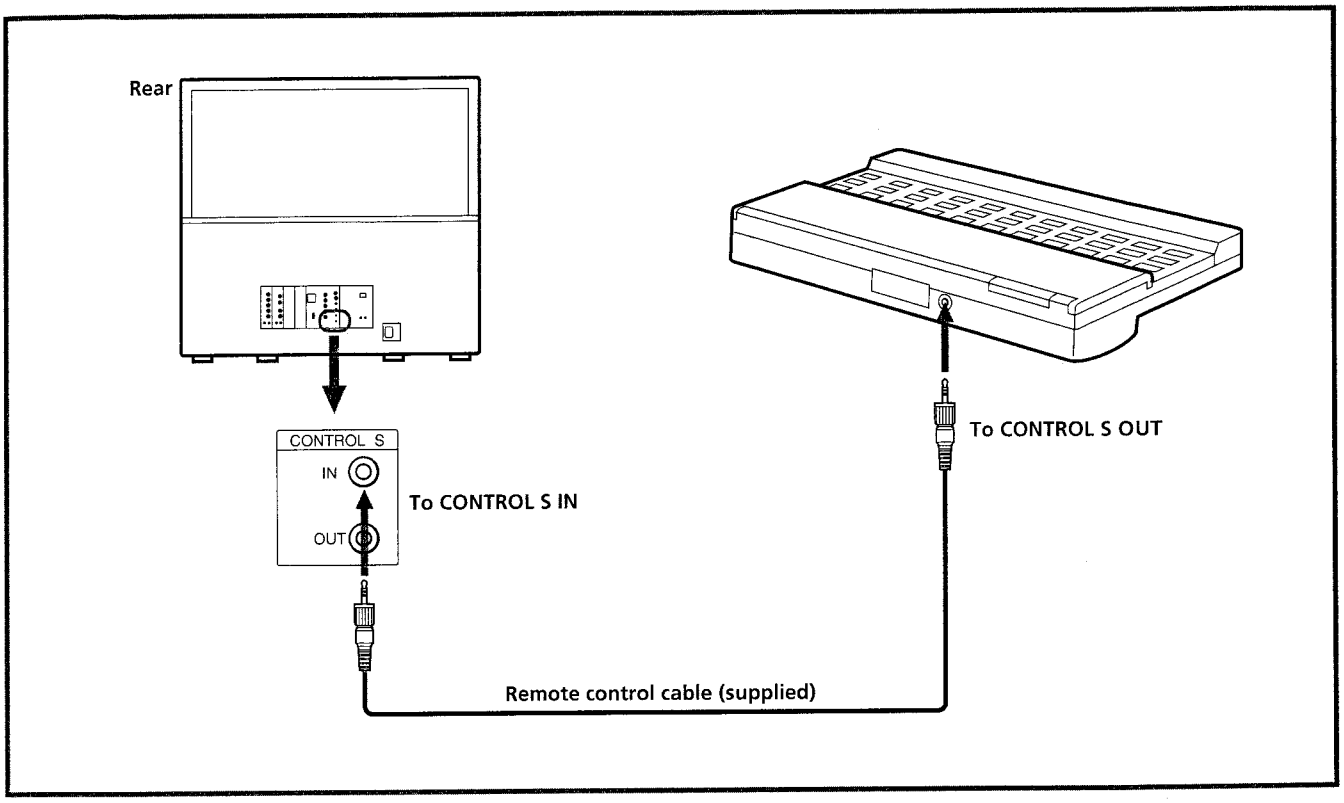
If the batteries are not inserted correctly, they may burst or leak fluid. Note the following points carefully.

- Ensure that the batteries are always inserted with the correct polarity.
- Do not use a combination of new and used batteries, or of different types of batteries.
  The batteries are not rechargeable.
- If the Remote Commander is not to be used for some time, remove the batteries.
  If fluid leakage occurs, wipe the spillage from the battery compartment, and insert new batteries.

Notes on wireless use of the Remote Commander

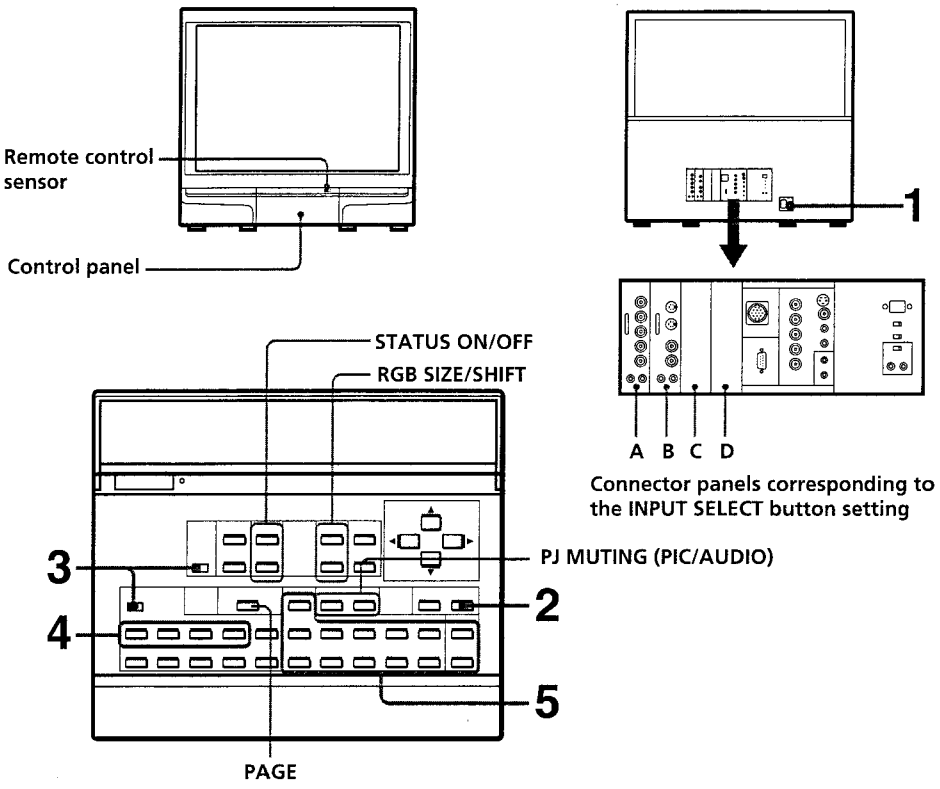
- If there is any obstruction between the Remote Commander and the projector, the Remote Commander will not be able to control the projector.
- The range of wireless operation of the Remote Commander is restricted. The closer the Remote Commander is to the projector, the wider the angle at which control is possible.

Connecting to the projector



Projector Operation

The buttons on the control panel also operate the unit.



1 **Depress the MAIN POWER switch on the rear (⎓ ON).**

2 **Press the POWER ON button on the Remote Commander or control panel.**
Leave the unit to warm up for about twenty minutes. (See next page.)
If you wish to use the unit immediately, press the PAGE button.

3 **Set the selectors.**
INPUT SEL/INDEX selector: INPUT SEL
PJ/SWITCHER selector: PJ

4 **Select the video input using the INPUT SELECT buttons.**
A: To show the video from equipment connected to the RGB IN connectors.
B: To show the video from equipment connected either to the Y/C IN or VIDEO IN connector.
C, D: To show the video from equipment connected to an optional interface board installed in the INPUT C or INPUT D slot.

5 **Adjust the picture and sound.**

To turn off the picture or sound individually

To turn off the sound without affecting the picture
Press the PJ MUTING AUDIO button.
To restore the sound, either press the PJ MUTING AUDIO button again, or press the VOL+ button.

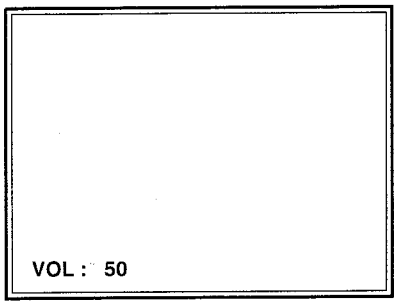
To turn off the picture without affecting the sound
Press the PJ MUTING PIC button.
To restore the picture, either press the PJ MUTING PIC button again, or press the CONTR+ button.

To turn off the on-screen status display

Press the STATUS OFF button. If you press any button in this state, "OFF" is shown at the lower right corner of the screen. Note that the PAGE setup can be displayed even when the status display is turned off.
To restore the on-screen status display, press the STATUS ON button.

Picture and Sound Adjustments

Use the VOL and PICTURE CONTROL buttons on the Remote Commander to make the adjustments.
Adjustment values are indicated as MIN, 1, 2, ... 98, 99, MAX.



VOL +/– buttons
+ ... increase the volume
– ... decrease the volume

CONTR +/– buttons
+ ... increase the contrast
– ... decrease the contrast

COLOR +/– buttons
+ ... make the color more saturated
– ... make the color less saturated

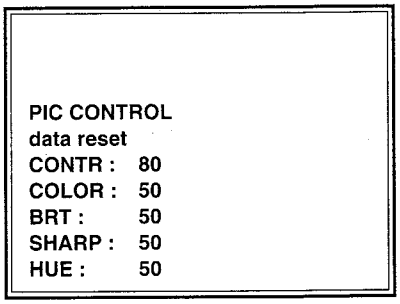
BRT +/– buttons
+ ... increase the brightness
– ... decrease the brightness

SHARP +/– buttons
+ ... increase the sharpness
– ... decrease the sharpness

HUE +/– buttons
+ ... make flesh tones greener
– ... make flesh tones more violet

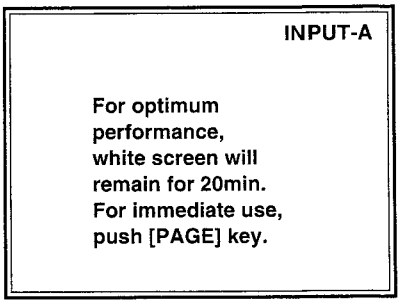
- The COLOR, SHARP and HUE adjustments have no effect on signals input to the RGB IN connectors.
- The HUE adjustment has no effect on PAL or SECAM inputs.

To return to the standard settings
Press the RESET button.
The standard settings are displayed on the screen.



Warming up

After powering on, always allow the projector to warm up for twenty minutes.
To provide the optimum picture quality, after the unit is powered on it automatically shows a white screen for twenty minutes while warming up.
During this time the message as shown on the right is displayed. It disappears after about 35 seconds, but is then shown periodically for about 5 seconds every 30 seconds.



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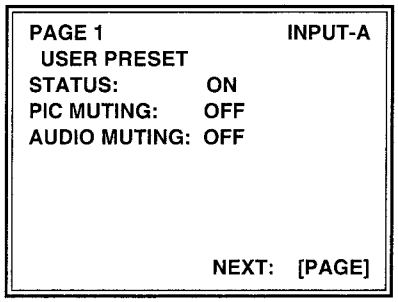
Checking the Current Settings

Press the PAGE button to display the current settings for various functions as shown below. Pages 1, 2 and 3 provide settings in addition to confirmation.

Pressing the button cycles through these pages as follows.

PAGE 1 → PAGE 2 → PAGE 3 → PAGE 4
↑ No display ←

PAGE 1

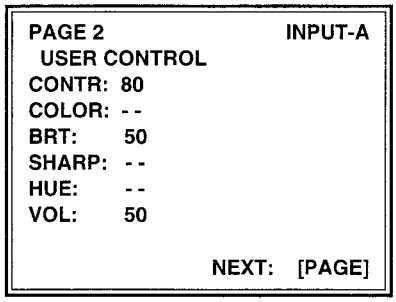


STATUS ON/OFF: This setting is preserved when the unit is powered off. When this is set to OFF, no screen status displays appear.

PIC MUTING ON/OFF: This setting is always OFF when the unit is powered on. When set to ON, the screen is blanked.

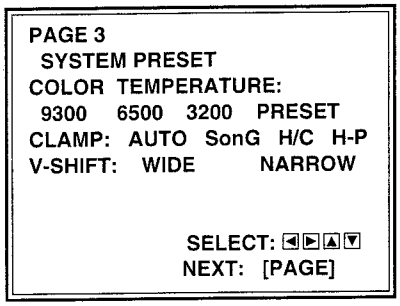
AUDIO MUTING ON/OFF: This setting is always OFF when the unit is powered on. When set to ON, the audio is muted.

PAGE 2



Displays picture properties and volume on a scale indicated as MIN, 1, 2, ... 98, 99, MAX.
It is possible to make independent settings for each of the inputs: the currently selected input appears in the top right corner of the screen.
A setting indicated by a pair of dashes is one which cannot be adjusted with the current input. (In the example shown, an RGB video input is being used.)
To change the settings, use the PICTURE CONTROL and VOL buttons.

PAGE 3



Displays color temperature, clamp position and vertical shift adjustments. The currently selected item flashes green. Use the ◄, ►, ▲, and ▼ buttons to adjust the settings.

COLOR TEMPERATURE: 9300/6500/3200/PRESET
Normally set to 6500. To make the whites bluish, select 9300, and to make the whites reddish select 3200. For high-definition video or other special signals, to make the color temperature the same as that of a monitor, select PRESET, and adjust.

V-SHIFT: WIDE/NARROW
Normally set to WIDE. When inputting signals such as superimposed signals for which the vertical sync frequency is not fixed, select NARROW to prevent vertical disintegration of the picture.

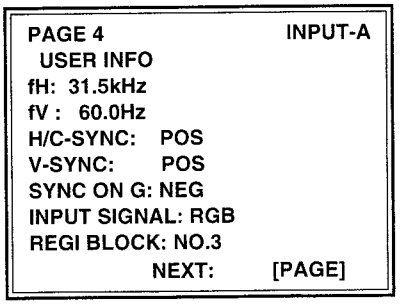
For details of the CLAMP setting see the section "If the Luminance of the Picture is Incorrect – Clamp Setting" (page 21)

To save the color temperature and clamp settings, press the MEMORY button. *(See page 20.)*

Note

The clamp and vertical shift settings only apply to RGB video inputs.

PAGE 4



Displays the status of currently selected input signals.
fH: Horizontal scan frequency.
fV: Vertical scan frequency.
H/C-SYNC: Polarity of the horizontal/composite sync signal.
V-SYNC: Polarity of the vertical sync signal.
SYNC ON G: Polarity of the sync on green signal.
POS: Positive polarity.
NEG: Negative polarity.
– – –: No sync signal input.
POS or NEG appearing in green: the sync signal is being used for projection.
POS or NEG appearing in white: the sync signal is input but not being used.
INPUT SIGNAL: Indicates the signal type as follows:
- **Y/C:** S-video
- **RGB:** RGB video
- **NTSC:** NTSC format signal
- **PAL:** PAL format signal
- **SECAM:** SECAM format signal
- **B & W:** Monochrome signal
- **Internal oscillation:** Using the internal signal generator

REGI BLOCK: Indicates the number of the memory block holding the current registration settings.

MC-Service

Picture Adjustments for an RGB Input

With an RGB input, you can adjust the picture size and position on the screen.
To clear the indications from the screen after adjusting the size and position, press the appropriate INPUT SELECT button again.

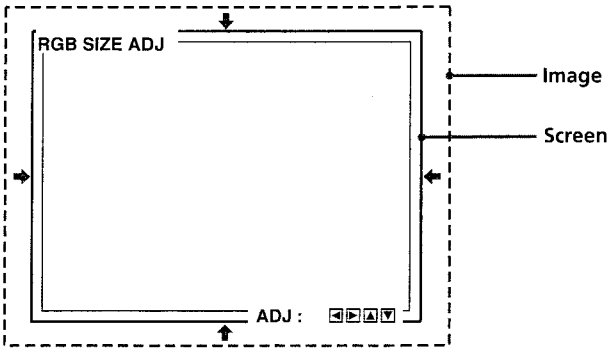
To save the size and position settings in memory, press the MEMORY button. *(See page 20.)*

Adjusting the image size

Make this adjustment if the image size does not match the size of the screen.

1 **Press the RGB SIZE button.**

2 **Use the four arrow buttons to adjust the image size so that it fits the screen.**
- ◀ to reduce the picture size horizontally
- ▶ to expand the picture horizontally
- ▲ to expand the picture vertically
- ▼ to reduce the picture size vertically



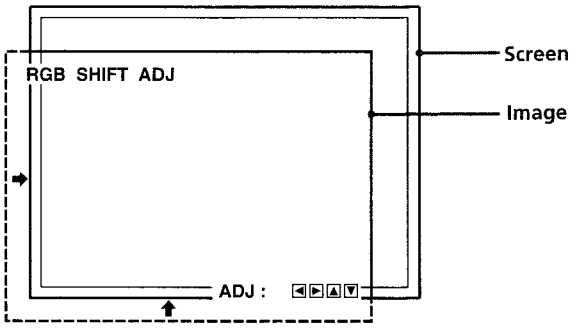
Adjusting the image position

Make this adjustment if the image position is not centered on the screen. (This adjustment is not possible with video input signals.)

1 **Press the RGB SHIFT button.**

2 **Use the four arrow buttons to adjust the image position so that it is centered on the screen.**
- ◀ to shift the picture left
- ▶ to shift the picture right
- ▲ to shift the picture up
- ▼ to shift the picture down

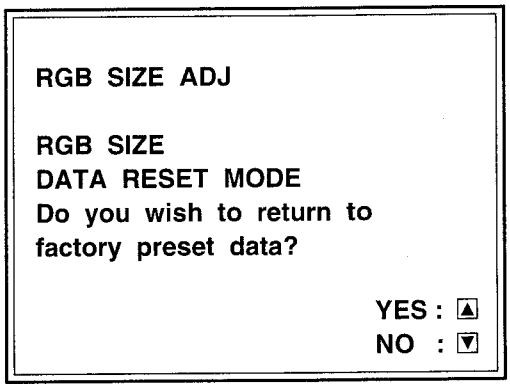
To clear the indications from the screen after adjusting the size and position, press the appropriate INPUT SELECT button again.
To save the size and position settings in memory, press the MEMORY button. *(See page 20.)*



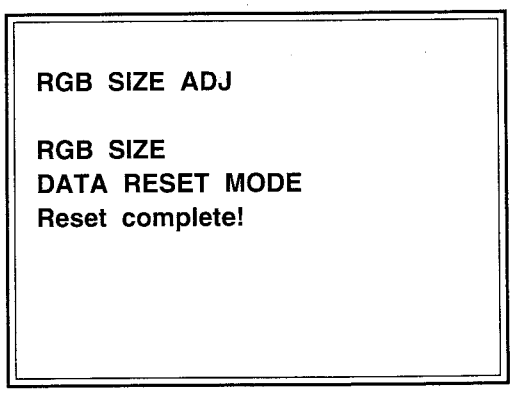
Returning the RGB input size and position settings to their factory defaults

1 **Press the RGB SIZE or RGB SHIFT button.**

2 **Press the ◄ and ► buttons simultaneously.**
A confirmation message appears: "Do you wish to return to factory preset data?"



3 **Press the ▲ button.**
The screen appears as shown below, indicating that the settings have been returned to their factory default values.
To abandon the reset, press the ▼ button.



MC-Service

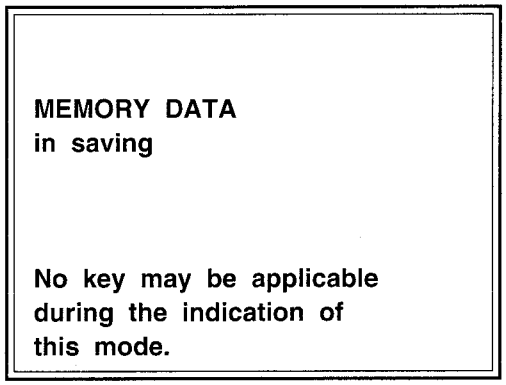
Saving Settings in Memory

The following settings can be saved in memory for future use.

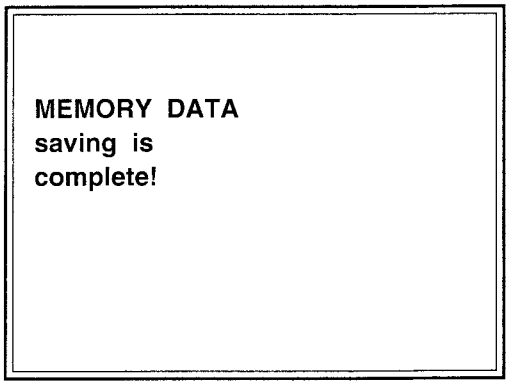
Color temperature (PAGE 3) setting
RGB input size and position settings

1 After making the settings, press the MEMORY button.

This saves the settings in memory. During the saving operation the following message appears on the screen, to indicate that while the settings are being saved the buttons are all disabled.



2 When the following message appears, the settings have been saved.



Screen Messages

Message colors: The messages are in four groups, color-coded as follows.

Color	Meaning
Green	Normal functions and settings
Cyan	Operation prompts and messages
Yellow	Warnings, and indications of abnormal states
White	Items on the setting screens, and items not selected on the PAGE screens

Warning messages: The following messages may appear if an operation is not carried out appropriately.

Message	Meaning
Not applicable!	This operation is not applicable.
PIC MUTING	This indicates an attempt to adjust the picture while the screen is blanked. To unblank the screen (i.e. remove the "PIC MUTING" setting), press the PJ MUTING PIC button.
Overflow!	An adjustment has reached the end of its range during RGB input size or position adjustment, or centering adjustment.
OFF	A button has been pressed while the status display is off. To restore the status display, press the STATUS ON button.

If the Luminance of the Picture is Incorrect — Clamp Setting

The clamp level determines the black level of the picture. The reference position for black clamping depends on the video signal type, and normally the internal processor determines the appropriate setting automatically. It is possible, however, for signal noise to cause an error. If the black level of the picture appears to be abnormal, whether too dark, too bright, or uneven, adjust the clamp setting as follows.

1 **Press the PAGE button three times.**

```
PAGE 3
 SYSTEM PRESET
COLOR TEMPERATURE:
 9300  6500  3200  PRESET
CLAMP: AUTO SonG H/C H-P
V-SHIFT: WIDE      NARROW


              SELECT: ◄►▲▼
              NEXT: [PAGE]
```

2 **Press the ◄, ►, ▲, and ▼ buttons to select the clamp setting.**

AUTO: Automatic clamp setting. This is the normal setting.

S on G: Select this setting when the black level is too bright, or tinged with green.

H/C: Select this setting when the overall picture is too dark, or the brightness is uneven.

H.P: If the luminance is not corrected by selecting either "S on G" or "H/C", select this setting and then adjust the horizontal shift.

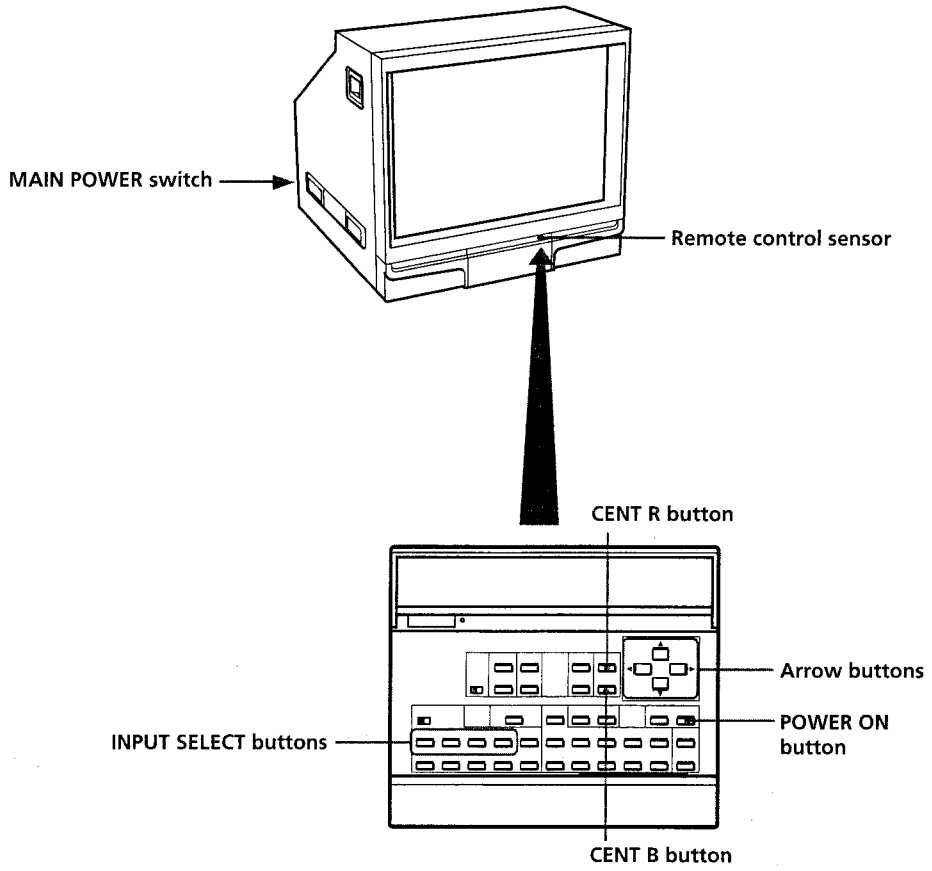
3 **Press the MEMORY button to save the setting.**

If no clamp setting gives a satisfactory picture

It is possible that there is a separate cause of the problem. Check again that the video signal connected is of the correct type, and that the other settings and connections are correct.

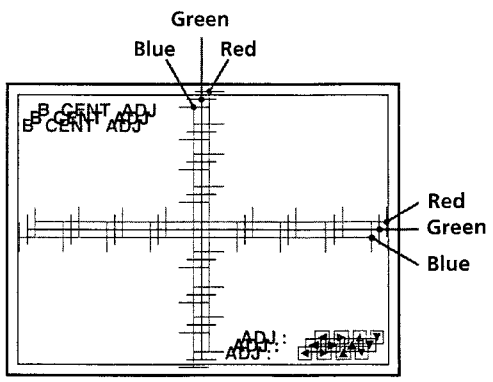
Registration Adjustment

For the projector to operate correctly, the images formed by the separate optical systems for red, green and blue must be correctly aligned, or in registration. Normally the registration requires no adjustment, but if there are colored fringes on white portions of the image, adjust using the following procedure.



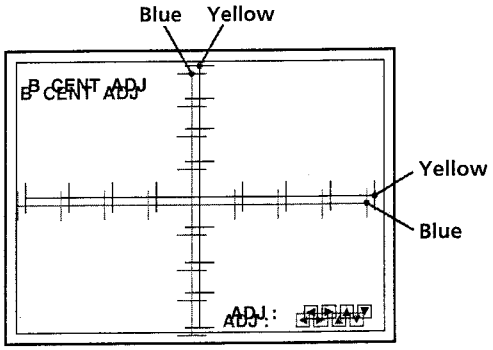
1 **Turn on the MAIN POWER switch on the rear of the main unit, and press the POWER ON button on the Remote Commander, to power the unit on.**

2 **Press the CENT R button.**
The screen shows a test pattern, for centering of the red pattern.



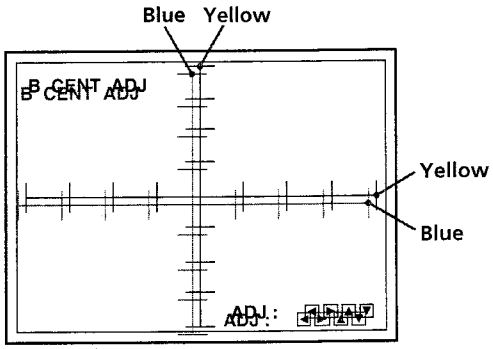
Screen with three colors out of registration

3 **Use the arrow buttons to adjust.**
Use the arrow buttons to align the red lines on the green lines, so that they appear yellow (if the blue lines are also out of registration). The red lines move in the direction shown on each arrow button.



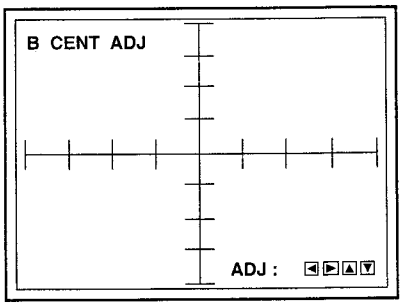
Screen with red and green in registration

4 **Press the CENT B button.**
The blue pattern can now be centered.



Screen with blue out of registration

5 **Use the arrow buttons to adjust.**
Use the arrow buttons to align the blue lines. The blue lines move in the direction shown on each arrow button. When all three colors are properly aligned, the lines will appear white.



Screen with all colors in registration

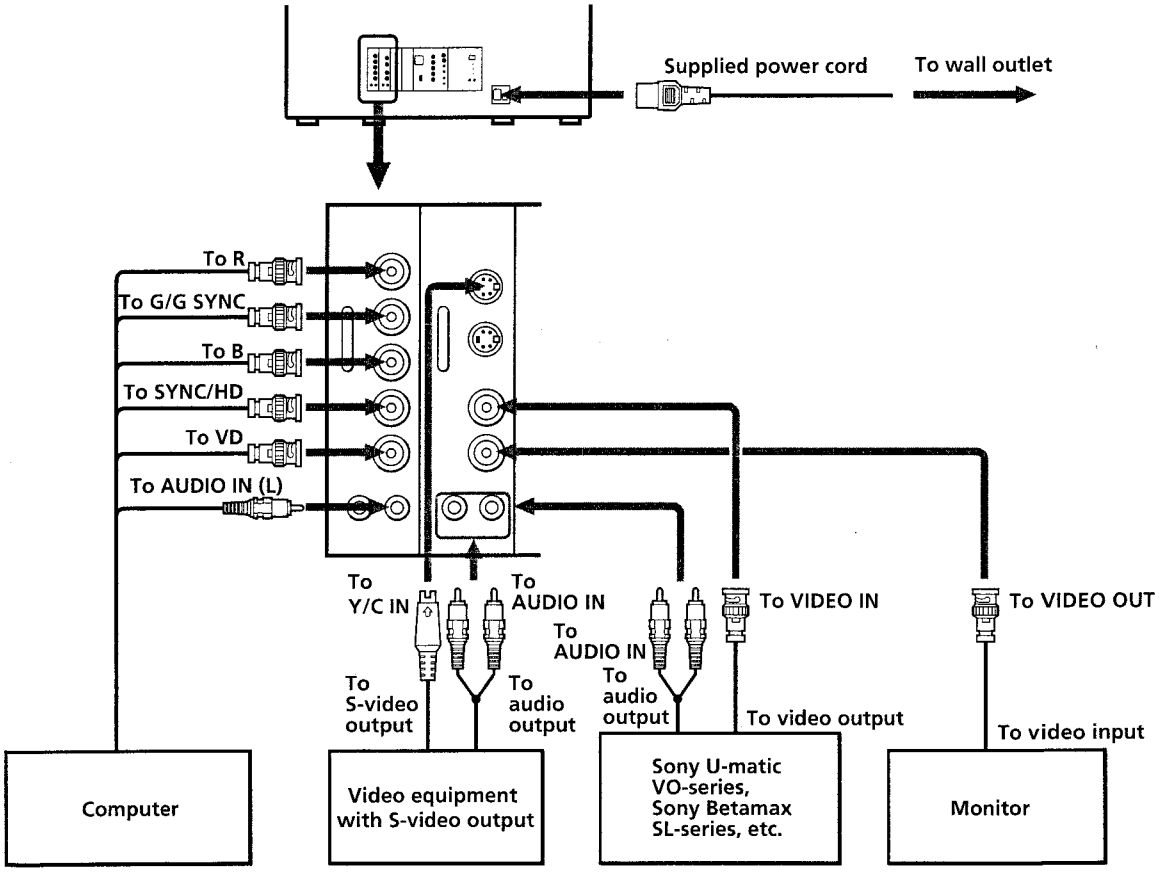
6 **Press the INPUT SELECT button corresponding to the input signals to switch from the test pattern to the input picture.**

System Enhancements

Notes on connection

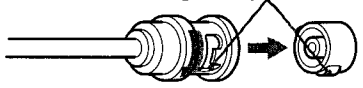
- Power off all items of equipment before making connections.
- Check that all interface cables have the correct connectors.
- Push connectors into sockets firmly. Always pull the plug, not the cable, when disconnecting.
- When using the REMOTE 1 connector, the maximum cable extent between the projector and switcher is 50 m. Use of a longer cable may lead to loss of picture quality. If you need to extend the cabling beyond 50 m, consult your Sony sales representative.
- For details of connection procedures, refer also to the instructions accompanying the other equipment.

Using INPUT A and INPUT B Connector Panels



Connecting BNC connectors

(a) Align the pin and insert.



(b) Turn clockwise.

Notes

- If signals are input to the Y/C IN and VIDEO IN connectors simultaneously, signals input to the Y/C IN connector take precedence. Be sure to connect input signals to only one of these connectors.
- If an external sync signal is input, it takes precedence over the internal sync signal. Note, however, that if the external sync signal is defective, the internal sync signal is used.

Notes

- Do not leave a still picture from a computer or video disc player projected for more than one hour.
- Depending on the video adaptor of the computer, the screen area may be reduced, or the screen may be darkened. This does not indicate a malfunction of the projector.

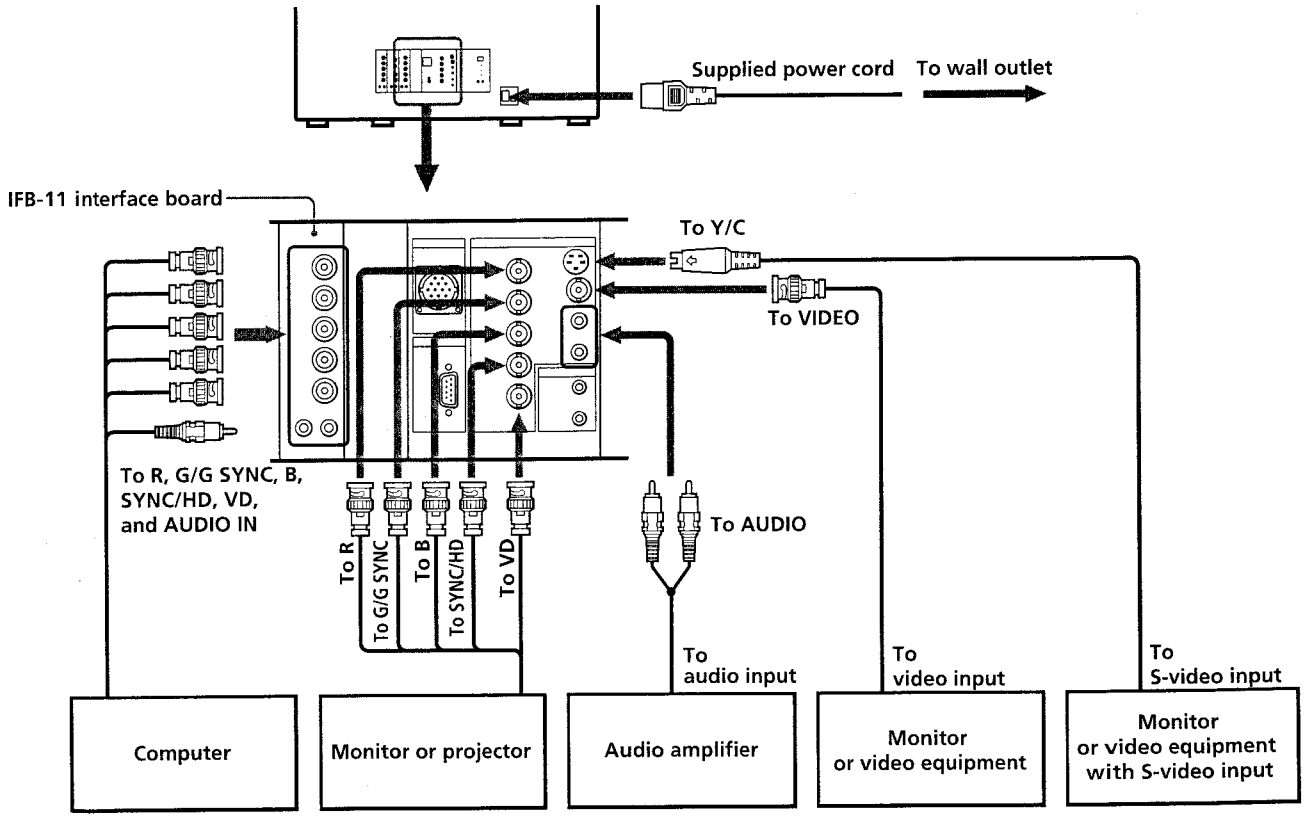
Picture adjustments

If the picture produced by a computer connected with an RGB video connection is off-center, press the RGB SHIFT button, and adjust with the arrow buttons. Similarly, if the picture size needs adjustment, press the RGB SIZE button, and adjust with the arrow buttons. *(See page 18.)*

Using the MONITOR OUT Connector Panel and Interface Boards

You can add up to two more inputs by installing optional IFB-11/20/30/1000/1200/1300 interface boards.

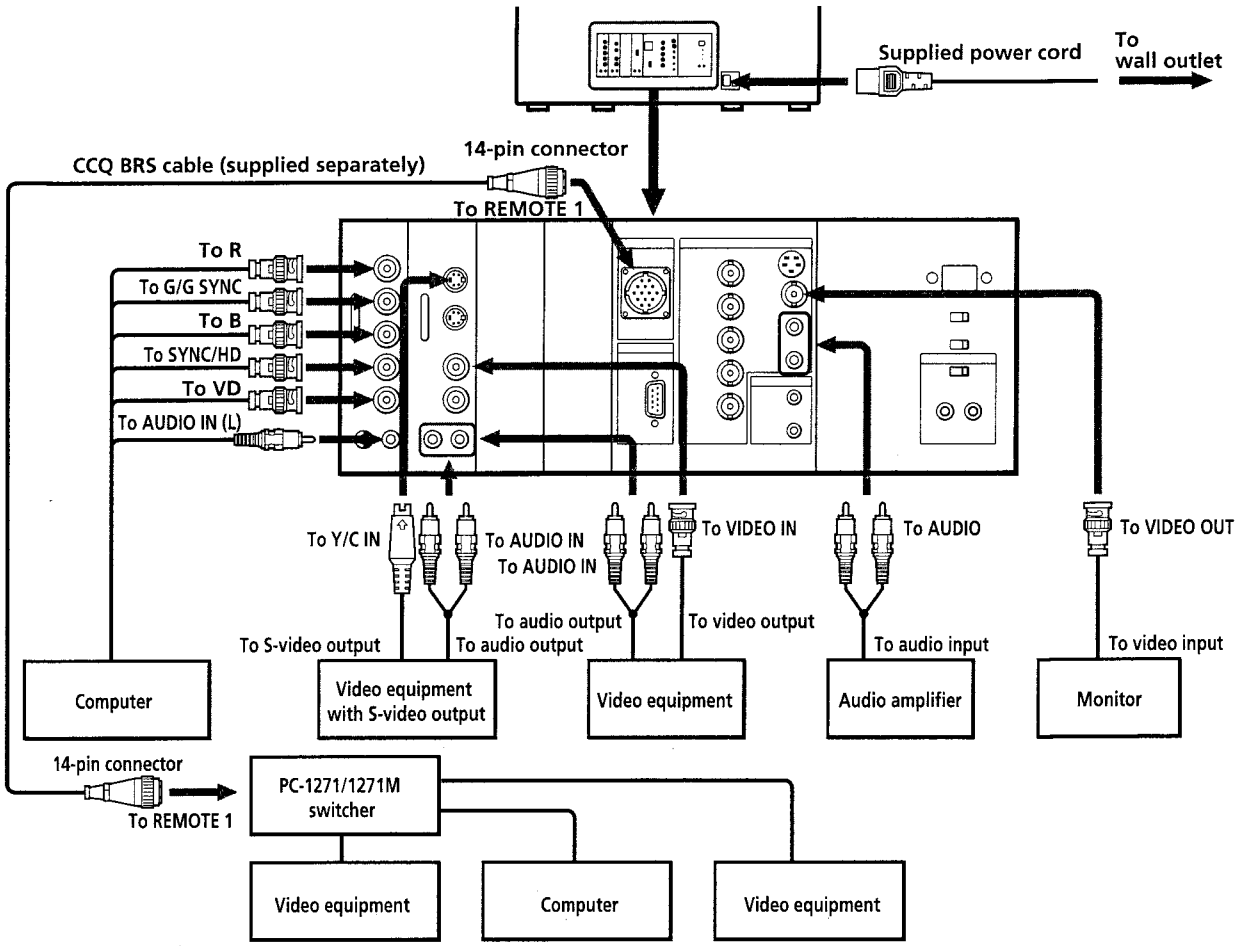
Example: With an IFB-11 board installed in the INPUT C slot



For installation of interface boards, consult your Sony service representative.

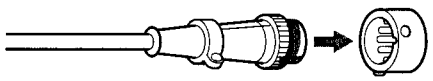
Using a Switcher

Using an optional PC-1271/1271M switcher allows you to connect various video devices and switch between them by simply pressing the INPUT SELECT buttons on the control panel or Remote Commander.



Connecting the 14-pin connectors

(a) Align the pins and insert.



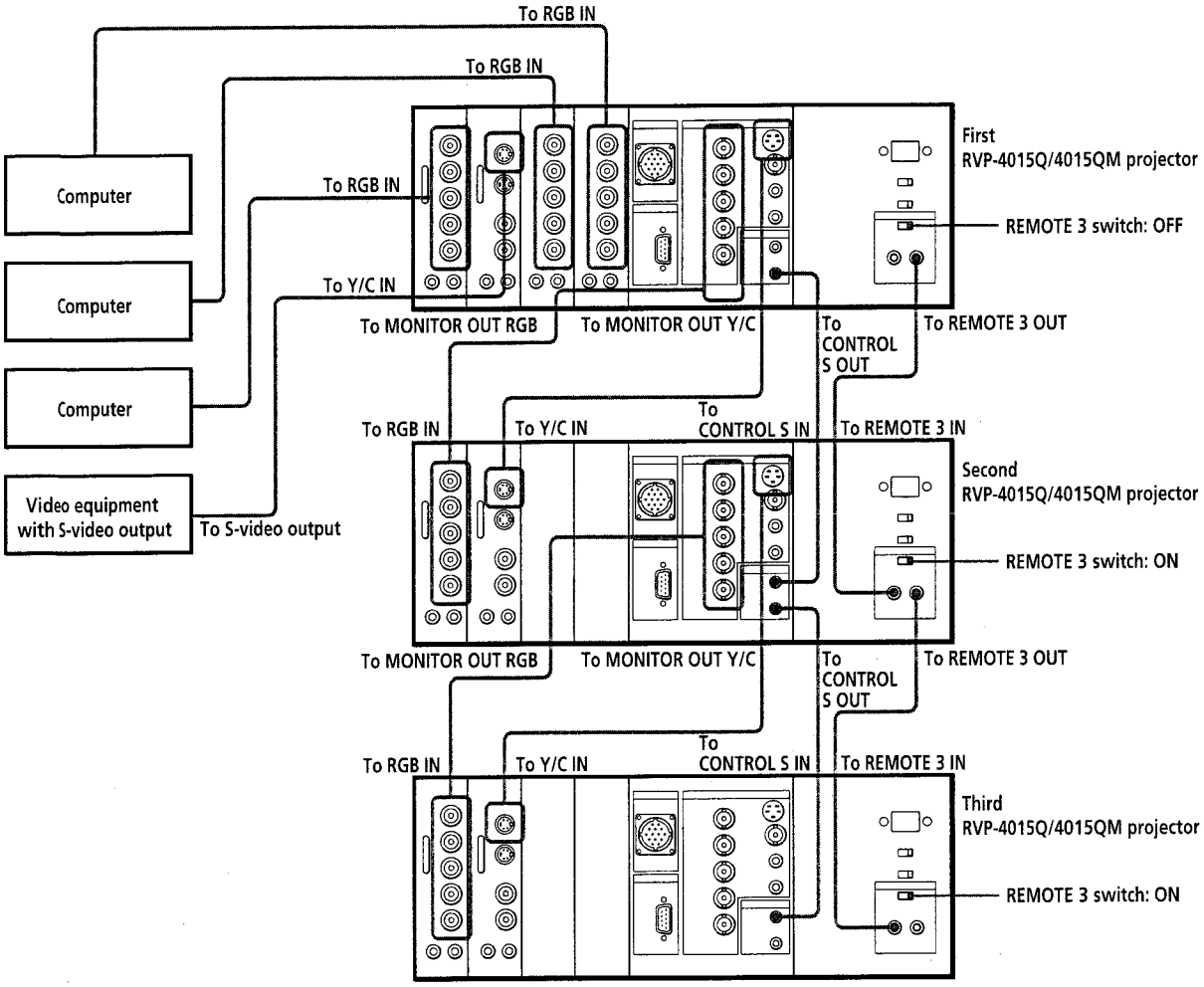
(b) Turn clockwise to lock.

Even when the switcher is connected, you can still directly input signals to the VIDEO IN and RGB IN connectors.

Using the INPUT SELECT buttons on the Remote Commander or control panel

First set the INPUT SEL/INDEX selector to INPUT SEL and PJ/SWITCHER selector to SWITCHER, then press the number button to select the input. When using two switchers and selecting an input to the second switcher (i.e. the one whose SINGLE/SECOND/OTHER switch is set to SECOND), first press the SECOND button, and then press the desired number button.

Connecting Multiple Projectors



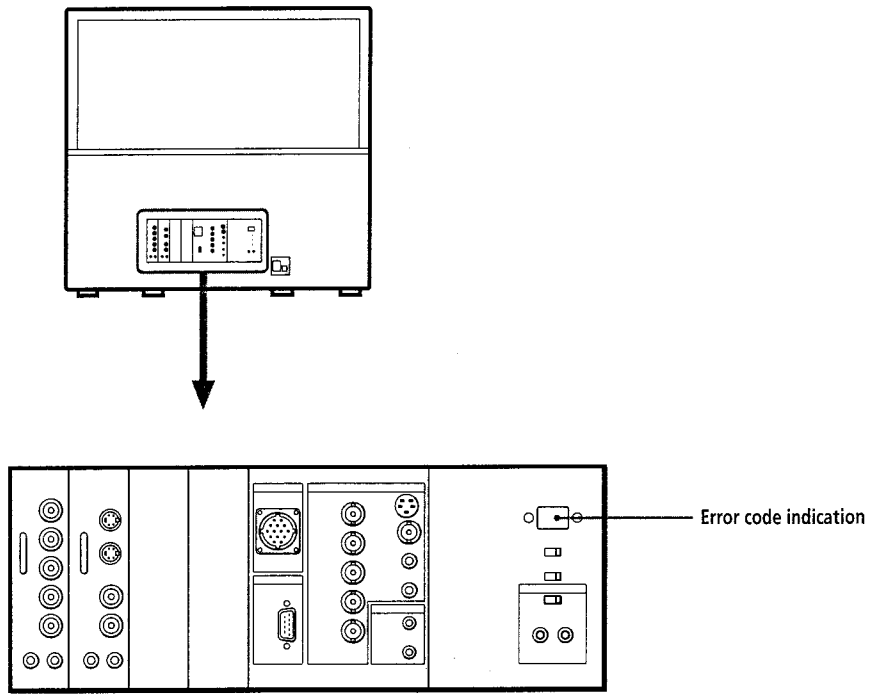
Note that the following restrictions apply when connecting multiple RVP-4015Q/4015QM units and using them at the same time.

- The second and later units in the connection show the video selected with the first projector.
- On the second and later units, set the REMOTE 3 switch to ON.
- The RGB input board (IFB-11) must be installed in the INPUT A slot and video input board (IFB-1000) in the INPUT B slot. If the positions of these boards are wrong, you may not be able to obtain the desired pictures.
- Use a two-core stereo cable (supplied) for connecting the REMOTE 3 connectors.
- When linking projectors by connecting the MONITOR OUT connector of one unit to a video input connector on the INPUT B panel of the next unit, use a combination of either VIDEO and VIDEO IN or Y/C and Y/C IN connectors. Do not mix these two combinations in the same system.

MC-Service

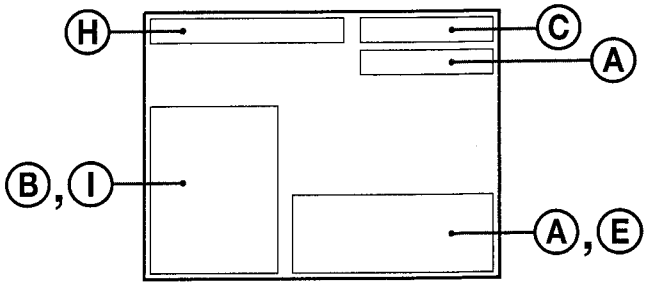
In the Event of Operating Problems

If the projector does not operate, make a note of the error code (two alphanumeric characters) in the error code indicator on the rear. Contact your Sony service representative quoting this error code to ensure prompt repair service.



Messages

Use this list to check the meaning of messages appearing on the screen.
The messages are grouped by their location on the screen: refer to the figure on the right.



Groups Ⓓ, Ⓕ, Ⓖ, Ⓙ and Ⓚ are whole-screen messages, or occur in several places.

Ⓐ	**Warning messages**	
	Not applicable!	This operation is not applicable in the current context.
	Overflow!	An adjustment has reached the end of its range.
	PIC MUTING	The video image is blanked.
	NO INPUT	There is no input signal.
	Input is not VIDEO	The input signal is not a VIDEO signal.
	Input is not NTSC	The input signal is not an NTSC signal.
	Input is not RGB	The input signal is not an RGB signal.
	Input is B & W	The input signal is a monochrome signal.
	OFF	The status display is off.
Ⓑ	**Picture adjustments**	
	CONTR	Contrast
	COLOR	Color saturation
	BRT	Brightness
	SHARP	Sharpness
	HUE	Hue adjustment
	PIC CONTROL data reset	The picture adjustment settings are reset.
Ⓒ	**Input channels**	
	INPUT-A	Input from the INPUT A board
	INPUT-B	Input from the INPUT B board
	INPUT-C	Input from the INPUT C board
	INPUT-D	Input from the INPUT D board
	SW'ER x-y	Input from optional switcher x-y (x = 1 or 2, y = 1 ... 8)

Ⓓ Status pages (1 to 4)

USER PRESET	User preset
USER CONTROL	User control
SYSTEM PRESET	System preset
INPUT INFO	Input information
PAGE 1	
STATUS ON/OFF	Status display on or off
PIC MUTING ON/OFF	Picture blanking on or off
AUDIO MUTING ON/OFF	Muting on or off
PAGE 2	
CONTR	Contrast
COLOR	Color saturation
BRT	Brightness
SHARP	Sharpness
HUE	Hue adjustment
VOL	Volume
PIC CONTROL data reset	The picture adjustment settings are reset.
PAGE 3	
COLOR TEMPERATURE: 9300/6500/ 3200/PRESET	The color temperature is 9300 K, 6500 K, 3200 K, or the preset value (which can be changed by service personnel).
CLAMP: AUTO / S on G / H/C / H.P	The clamp setting is automatic, internal, external, or horizontal pulse.
V-SHIFT: WIDE/NARROW	The vertical shift variation range is wide or narrow.
PAGE 4	
INPUT SIGNAL	Input signal
Y/C	S-video input
RGB	RGB video input
B & W	Monochrome input
NTSC	NTSC video input
PAL	PAL video input
SECAM	SECAM video input
fH	Horizontal scan frequency
fV	Vertical scan frequency
Internal oscillation	The internal signal generator is being used.
H/C-SYNC	Horizontal sync or composite sync signal.
V-SYNC	Vertical sync signal.
SYNC ON G	Composite video signal.
H/C-SYNC: POS	H/C-SYNC signal is positive polarity.
H/C-SYNC: NEG	H/C-SYNC signal is negative polarity.
H/C-SYNC: – – –	There is no H/C-SYNC signal input.
V-SYNC: POS	V-SYNC signal is positive polarity.
V-SYNC: NEG	V-SYNC signal is negative polarity.
V-SYNC: – – –	There is no V-SYNC signal input.
SYNC ON G: NEG	SYNC ON G signal is negative polarity.
SYNC ON G: – – –	There is no SYNC ON G signal input.
REGI BLOCK: NO.X	Indicates the number of the memory block holding the current registration settings.

Ⓔ Operations

YES: ▲	Press the ▲ button to select "Yes".
NO: ▼	Press the ▼ button to select "No".
SELECT: ◀ ▶	Press the ◀ and ▶ buttons to make the selection.
SELECT: ◀ ▶ ▲ ▼	Press the ◀, ▶, ▲, and ▼ buttons to make the selection.
ADJ: ◀ ▶ ▲ ▼	Press the ◀, ▶, ▲, and ▼ buttons to make the adjustment.
ADJ: ◀ ▶	Press the ◀ or ▶ button to make the adjustment.
ADJ: ▲ ▼	Press the ▲ or ▼ button to make the adjustment.
NEXT: [PAGE]	Press the PAGE button to switch to the next page.
EXIT: [PAGE]	Press the PAGE button to exit from the status page display.

Ⓕ	**Saving in memory**	
	MEMORY DATA in saving. MEMORY DATA saving is complete! No key may be applicable during the indication of this mode.	Settings are being saved in memory. Settings have been saved in memory. The buttons are all disabled while settings are being saved in memory.
Ⓖ	**Resetting (to preset values)**	
	Do you wish to return to factory preset data? Reset complete! RGB SIZE DATA RESET MODE RGB SHIFT DATA RESET MODE	Confirm resetting to factory default? Reset completed. Resetting image size for RGB input. Resetting image position for RGB input.
Ⓗ	**Adjustments**	
	RGB SIZE ADJ RGB SHIFT ADJ R CENT ADJ B CENT AD	Adjusting image size for RGB input. Adjusting image position for RGB input. Adjusting registration for red image. Adjusting registration for blue image.
Ⓘ	**Adjustment settings**	
	H: xxx V: xxx Hf: xxx Hc: xxx Vf: xxx Vc: xxx	Horizontal adjustment (xxx = 0 to 255) Vertical adjustment (xxx = 0 to 255) Horizontal registration fine adjustment (xxx = 0 to 255). Changes every time you press the arrow button. Horizontal registration coarse adjustment (xxx = 0 to 255). Changes when you hold down the arrow button. Vertical registration fine adjustment (xxx = 0 to 255). Changes every time you press the arrow button. Vertical registration coarse adjustment (xxx = 0 to 255). Changes when you hold down the arrow button.
Ⓙ	**Warning messages**	
	fH is too high! This input signal cannot be projected as the horizontal frequency is too high.	The horizontal frequency of the input signal is too high.
Ⓚ	**Miscellaneous**	
	For optimum performance, white screen will remain for 20 min. For immediate use, push [PAGE] key.	For optimum performance, the screen will remain white for 20 minutes. To use the unit immediately, press the PAGE button.

Specifications

Optical system

Projection system 3 picture tubes, 3 lenses, horizontal inline system, rear projection type

Picture tubes 7-inch (5.5-inch phosphor size) high brightness monochromatic CRT with sealed coolant

Lenses HACC (high-resolution aspherical and color corrected) lenses
f/1.0, 96 mm

Projected picture size
40 inches (101 cm) on diagonal

Luminance 100 ft-L (white peak)
25 ft-L (all white)

Electrical system

Color systems NTSC, PAL, SECAM, and NTSC4.43, switched automatically

Resolution 800 × 800 pixels (RGB input at 50 kHz horizontal scan, 60 Hz vertical scan), 700 TV lines (VIDEO input)

RGB inputs Horizontal frequency: 15 kHz to 85 kHz
Vertical frequency: 38 Hz to 150 Hz

Test signal Built-in cross hair pattern generator

Speakers Total output 5 W + 5 W

Inputs

Video inputs
VIDEO IN
Y/C: 4-pin mini-DIN connector
Y signal input:
1 Vp-p ± 2 dB, sync negative, terminated in 75 Ω
C signal input:
Burst, 0.286 Vp-p ± 2 dB, terminated in 75 Ω (NTSC)
Burst, 0.3 Vp-p ± 2 dB, terminated in 75 Ω (PAL)
VIDEO: BNC connector
Composite video input, 1 Vp-p ± 2 dB, sync negative, terminated in 75 Ω
AUDIO IN: phono jack
408 mVrms, minimum impedance of 47 kΩ

RGB inputs
R: BNC connector
Red input, 0.7 Vp-p ± 2 dB, terminated in 75 Ω, positive polarity
G/G SYNC: BNC connector
Green input, 0.7 Vp-p ± 2 dB, terminated in 75 Ω, positive polarity
Green/sync input, 1 Vp-p ± 2 dB, terminated in 75 Ω, positive polarity
B: BNC connector
Blue input, 0.7 Vp-p ± 2 dB, terminated in 75 Ω, positive polarity
SYNC/HD: BNC connector
Composite sync input, 0.3 to 4 Vp-p, terminated in 75 Ω, positive and negative polarities
Horizontal sync input, 0.3 to 4 Vp-p, terminated in 75 Ω, positive and negative polarities
VD: BNC connector
Vertical sync input, 0.3 to 4 Vp-p, terminated in 75 Ω, positive and negative polarities
AUDIO IN: Phono jacks

Control signal inputs
REMOTE 1: 14-pin connector *(see "Pin assignments" on page 34)*
REMOTE 2: 9-pin connector *(see "Pin assignments" on page 34)*
REMOTE 3 IN: Mini-jack
CONTROL S IN: Mini-jack, 5 Vp-p

Outputs

VIDEO OUT, MONITOR OUT VIDEO:
BNC connectors
Composite video output, 1 Vp-p ± 3 dB, 75 Ω impedance
VIDEO OUT outputs signals input to VIDEO IN
MONITOR OUT Y/C: mini-DIN 4-pin connector
Y (luminance) signal output:
1 Vp-p ± 3 dB, 75 Ω impedance
C (chrominance) signal output:
0.286 Vp-p ± 3 dB, 75 Ω impedance (NTSC)
0.3 Vp-p ± 3 dB, 75 Ω impedance (PAL)
MONITOR OUT R: BNC connector
Red output, 0.7 Vp-p ± 3 dB, 75 Ω impedance
MONITOR OUT G: BNC connector
Green output, 0.7 Vp-p ± 3 dB, 75 Ω impedance
Green/sync output, 1 Vp-p ± 3 dB, 75 Ω impedance
MONITOR OUT B: BNC connector
Blue output, 0.7 Vp-p ± 3 dB, 75 Ω impedance
MONITOR OUT SYNC/HD: BNC connector
Composite/horizontal sync output, 1 Vp-p ± 3 dB, 75 Ω impedance
MONITOR OUT VD: BNC connector
Vertical sync output, 1 Vp-p ± 3 dB, 75 Ω impedance
MONITOR OUT AUDIO: Phono jacks, variable/fixed
CONTROL S OUT: Mini-jack, 5 Vp-p
REMOTE 3 OUT: Mini-jack

General

Power requirements
RVP-4015Q: 120 V AC, 50/60 Hz
RVP-4015QM: 220 to 240 V AC, 50/60 Hz

Power consumption
590 W maximum

Temperature to guarantee specified performance
0°C to 40°C (35 to 80% humidity)

Storage temperature
–20°C to 60°C (10 to 80% humidity)

Dimensions 931 × 874 × 752 mm (w/h/d)
(36 3/4 × 34 1/2 × 29 5/8 inches)

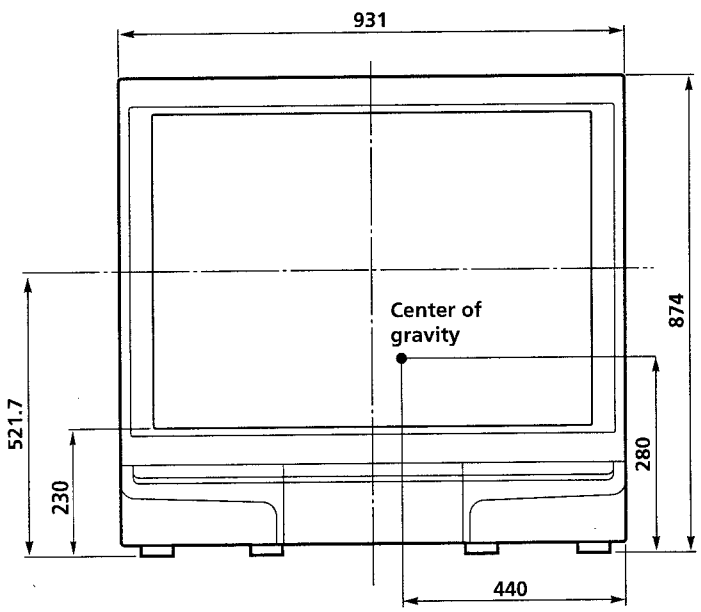
Mass Approximately 96 kg (211 lb)

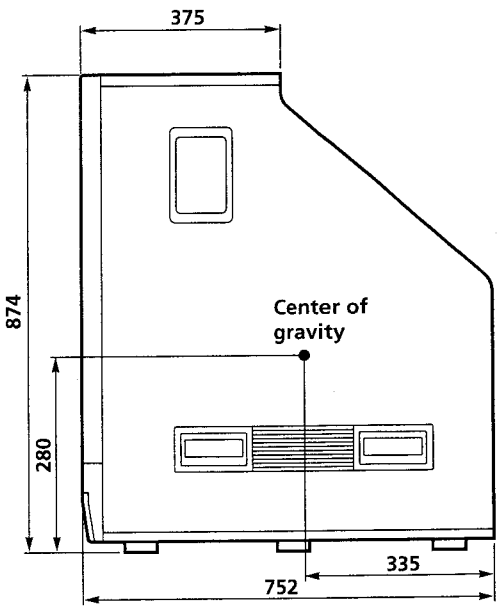
Accessories supplied
RM-PJ4010 Remote Commander (1)
R6 (AA) batteries (3)
Remote control cable, two-core stereo, 15 m (about 49 feet) (2)
AC power cord (1)
Operating Instructions (1)
Installation Manual for Dealers (1)

Design and specifications are subject to change without notice.

Dimensions

Note: All dimensions are in millimeters.

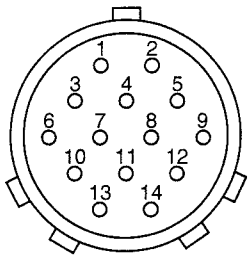




MC-Service

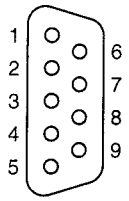
Pin assignments

REMOTE 1 connector (14-pin)



Pin	Signal
1	Ground
2	HD/Composite sync
3	SIRCS
4	No connection
5	Ground (SIRCS)
6	Blue/Color
7	Ground (Blue/Chrominance)
8	Ground (Green/Luminance)
9	Green/Luminance
10	RGB/Video control
11	Red/Composite video
12	Composite video/YC control
13	Audio
14	Vertical sync

REMOTE 2 connector (9-pin)



Pin	Signal
1	Frame ground
2	$\overline{\text{Transmit A}}$
3	Receive B
4	Receive common
5	Spare
6	Transmit
7	Transmit B
8	$\overline{\text{Receive A}}$
9	Frame ground

Signal levels comply with EIA RS-422.

Y/C video input connector (4-pin mini-DIN)

Accessories (not supplied)

Signal interface switcher	PC-1271/1271M
Interface cable	CCQ BRS
Interface boards	IFB-11 (5 BNC, analog RGB inputs)
	IFB-20 (D-SUB 9-pin, analog RGB input)
	IFB-30 (D-SUB 9-pin, digital RGB input)
	IFB-1000 (BNC, video input; DIN 4-pin, S-video input)
	IFB-1200 (3 BNC, component inputs)
	IFB-101 (index board)
	IFB-3000 (3 BNC, component inputs; BNC, video input; DIN 4-pin, S-video input)
Interface unit	IFU-1271/1271M